REACTOR FOR PERFORMING EXOTHERMIC REACTIONS AND METHOD OF USE OF SUCH REACTOR

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Abstract of **RU 2206384 (C1)**

FIELD: performing exothermic catalytic reactions. SUBSTANCE: proposed reactor has housing with hatches and bottom provided with units for inlet of raw material vapor and discharge of product, layers of catalyst and units for removal of heat of reaction made in form of distributors for feeding cooling gas and convective heat exchangers. Mass of catalyst in adjacent layers increases by 1.2-2 times. Each heat exchanger is located in constriction of free section of reactor formed by surfaces of shaped inserts in reactor housing. Each distributor is located under shaped insert in zone of widening free section of reactor. Method of operation of reactor consists in conversion of raw material heated to conversion temperature in layers of catalyst laid on gas-permeable partitions, thus obtaining reaction flow and cooling by means of heat-removing units.; Temperature at catalyst layer outlet is maintained at constant level and differential between inlet and outlet temperature shall not exceed 40 C. Activity of catalyst is checked by differential of inlet and outlet temperatures. In case of reduction of temperature differential, inlet temperature of flow is increased by reduction of cooling between catalyst layers in order to maintain constant temperature. EFFECT: intensification of heat exchange; enhanced operational stability of reactor. 6 cl, 4 dwg